

Remarks

By the foregoing Amendment, claims 1 and 21-22 are amended, claims 9 and 20 are cancelled, and new claims 24-25 are presented. No new matter is added by this Amendment. Entry of the Amendment, and favorable consideration thereof, is earnestly requested.

The Examiner has objected to claim 9 as a duplicate of claim 3. Accordingly, claim 9 has been cancelled.

Independent Claims 1 and 22

Novelty

The Examiner has rejected independent claim 1 under 35 U.S.C. §102(b) as anticipated by Pelchy, U.S. Patent No. 5,857,963. For the sole purpose of expediting prosecution, claim 1 has been amended to incorporate the limitations of claim 20. Accordingly, claim 20 has been cancelled, and claim 21 has been amended to correct its dependency.

Pelchy '963 does not anticipate independent claim 1 or 22, as amended, because all of the elements in these claims are not shown in this reference. As noted by the Examiner, Pelchy '963 fails to disclose a circuit board folded from a planar blank circuit board. (See 9/1/05 Office Action at 5).

Obviousness

Additionally, neither amended claim 1 nor claim 22 is obvious over the prior art. Applicant notes that the Examiner rejected claim 20 (now cancelled and incorporated into claim 1, and well as claim 22 (which the Examiner has indicated corresponds to original claims 1, 20, and 21), under 35 U.S.C. §103 as obvious over Pelchy '963, at the time of the invention in view of Babutzka, U.S. Patent No. 6,195,261. Applicant respectfully requests reconsideration for the reasons set forth below.

Neither Pelchy '963 nor Babutzka renders independent claims 1 or 22 obvious in view of the other, for several reasons. As a preliminary matter, Applicant submits that there is no suggestion or motivation for one skilled in the art to combine these references. Pelchy '963 relates to an imager assembly for an endoscope. Babutzka relates to a device for positioning circuit components that require a specific orientation (i.e., are direction-sensitive), in particular, for motor vehicles. See Abstract; Col.1, Ins. 37-38; Col.3, Ins. 64-67. There would be no reason, of course, for one skilled in the art looking at Babutzka to look at references specifically relating to endoscope imager assemblies, nor would one skilled in the art of imager assemblies, with Pelchy '963 in front of them, have any motivation to look at references related to specialized circuit boards for accommodating direction-sensitive circuit components, as are found in motor vehicles, in order to find a compact, sturdy board design for the imager assembly of a scope. Applicant respectfully notes that its disclosure cannot be used as a roadmap to piece together various elements appearing in unrelated references—the suggestion to

combine must be found in the prior art, not the applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991) (suggestion to combine must be found in the prior art, not the applicant's disclosure).

Regardless of the reasonableness of the likelihood that skilled persons in one of these areas would look to references in the other, Applicant respectfully notes that, in order for the claimed invention to be obvious over the prior art, there must be *some* suggestion or motivation in the prior art to make the relevant modification. See, e.g., MPEP 2143.01 ("The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination."). Here, there is no such suggestion to modify Pelchy '963 as would be necessary in order to arrive at the present invention. Pelchy '963 has a horizontal member (26) on which the imager package is mounted, and a single vertical member (25) extending down from the middle of the horizontal member, such that circuit components are mounted on either side of this single vertical member. See Fig.1. This T-shaped structure is a very basic aspect of its design. See Abstract; Claim 1. There is simply no suggestion that it would be desirable to change this fundamental aspect of its design in order to arrive at the particular three-section, folded board recited in claims 1 and 22. The fact that the basic design of could be completely changed to arrive at the present invention, such hindsight is impermissible—there must have been some suggestion in the reference to do so. *In re Mills*, 916 F.2d 680, 682, 16 USPQ2d 1430, 1432 (Fed. Cir. 1990) (fact that prior art "may be capable of being modified to run

the way the apparatus is claimed, there must be some suggestion or motivation in the reference to do so.”).

Additionally, even if the Pelchy '963 and Babutzka references *were* combined and the basic T-shaped design of Pelchy '963 were changed contrary to its teachings, one would not arrive at claim 1 or 22, as amended, as all of the elements recited in these claims would still not be present. This is due to the fact that the circuit board of Babutzka is very different from that recited in claims 1 and 22, in several critical ways.

First, the circuit board disclosed in Babutzka having three connected sections (see Fig. 1b) is made from several sections that are linked to one another via hinges 7, 8, 9. Therefore, the sections of the board are hingedly connected, not “integrally connected,” as is required by claims 1 and 22, as amended.

Similarly, the board disclosed in Babutzka is not “folded from a planar board blank” (resulting in the claimed “integrally formed” first, second, and third sections). To the contrary, Babutzka specifically discloses to either use separate rigid pieces and attach them with hinges (see Fig. 1b; Col.2, Ins. 42-56) or to use a bending elastic board (such as flexible polyimide) (see Fig. 1a; Col.2 Ins. 30-37). It does not disclose a circuit board folded into first, second, and third sections from a planar board blank.

More specifically, Babutzka certainly does not disclose such a board folded such that one section of the board (i.e., the “third section”) is opposite the image sensor. Claims 1 and 22 both require that the image sensor is arranged at one end of the circuit

board, and that the board is folded such that the third section is opposite the sensor.

Likewise, Pelchy does not provide any suggestion to employ a circuit board folded from a planar board blank in this particular way, as it specifically teaches to use the very

- different T-shaped structure described above.

New Claim 24

New claim 24 has also been presented, which recites particular aspects of the orientation of the image sensor and the different sections of the circuit board.

Specifically, claim 24 recites that the first and second sections are “substantially parallel to each other” and “substantially perpendicular to the image pick-up surface” of the sensor, and that the sensor is bonded to the first end of the first and second sections, and that the third section is integrally formed with the second end of the second section.

Support for this claim is found, for example, at bottom p.6 – top p.7, and p.8, 2nd full paragraph. The cited references do not disclose this particular arrangement of the sections and image sensor, as they teach very different designs as discussed above.


For each of these reasons, Applicant respectfully submits that independent claims 1 and 22, as amended, are allowable over the cited art.

Applicant submits that, in light of the amendment herein, generic claim 1 is allowable, and thus, withdrawn claims 6-7, 10-12, and 16 are also allowable.

It is respectfully submitted that claims 1-8, 10-19, and 20-25, all of the claims remaining in the application, are in order for allowance, and early notice to that effect is respectfully requested.

Respectfully submitted,

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